REMARKS

This Response is filed in reply to the Office Action dated November 4, 2003, and the re-issue of such Office Action on January 21, 2004.

In this Response, Applicants amend the specification and title, amend claims 1, 3, 14, 16, and 23 to more specifically recite inherent features thereof and correct typographic errors, add new claims 24-33, and traverse the Examiner's rejection of claims 1-23. Amendments to the claims are not an acquiescence to any of the rejections. Further, silence with regard to any of the Examiner's rejections is not an acquiescence to such rejections. Specifically, silence with regard to Examiner's rejection of a dependent claim, when such claim depends from an independent claim that Applicants consider allowable for reasons provided herein, is not an acquiescence to such rejection of the dependent claim(s), but rather a recognition by Applicants that such previously lodged rejection is moot based on Applicants' remarks and/or amendments relative to the independent claim (that Applicants consider allowable) from which the dependent claim(s) depends. Upon entry of the amendment, claims 1-38 are pending in the present application.

The issues of the Office Action are presented below with reference to the Office Action.

With regard to the paragraphs entitled "Double Patenting:"

The Examiner provisionally rejected claims 4, 5, and 23 based on nonstatutory double patenting over claims 1, 4, and 20, respectively of co-pending Application No. 10/004,090. Applicants delay the issue of filing a terminal disclaimer in compliance with 37 C.F.R. §1.321(c) until the other claim rejections are removed.

With regard to the paragraphs entitled "Specification:"

The Title of the application is amended to "Disk Cache Interfacing System and Method".

The application serial number of the co-pending application entitled "Data Storage Device" is added to the paragraph appearing on page 1 in the section entitled "Reference to Related Applications", and to the paragraph beginning on page 8, line 15, and ending on page 8,

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line 21, as requested by the Examiner. Additionally, the word "Applcation" appearing in the above-noted paragraph on page 8 has been replaced with the word "Application" to correct a typographical error.

The word "have" has been added before the word "platters" appearing in the paragraph beginning on page 2, line 13, and ending on page 2, line 24, to correct a typographical error.

The word "requests" appearing before the wording "specify different respective data storage addresses" in the paragraph beginning on page 2, line 30, and ending on page 3, line 5, has been removed to correct a typographical error.

Examiner stated that on page 4, line 11 Applicants appear to be using a definition of "memory" that is inconsistent with the accepted meaning of the term in the art. Applicants believe that it is inherent from the paragraph, and would be understood by a person skilled in the art to which the present application pertains, that the term "memory" as used on page 4, line 11 of the specification refers to volatile memory (i.e., active memory elements that lose their content if they lose their power and/or if not refreshed) and is distinguishable from the non-volatile disks forming the cache's storage area. However, for greater clarity and to expedite prosecution, the word "volatile" has been added before the word "memory" on page 4, lines 11.

The Examiner's queried the nature of the "protocols" referred to in relation to name "Infiniband". Although the Applicants believe that it is inherent from the specification and would be understood by a person skilled in the art, that the protocols referred to, including Infiniband, are protocols that facilitate the communication of data between interconnected devices that are compatible with such protocols, for greater clarity, and to expedite prosecution of this application, Applicants added the wording "interconnectivity and/or communications" before the wording "protocols such as SCSI (Small Computer System Interface), Fibre Channel, or INFINIBAND." on page 5 in the paragraph beginning at line 10 and ending at line 22.

Applicant also capitalized the trade-mark "INFINIBAND", appearing on page 2 in the paragraph beginning at line 13 and ending at line 24, and on page 5 in the paragraph beginning at line 10 and ending at line 22, as requested by the Examiner.

<u>With regard to the paragraphs entitled "Claim Rejections - 35 U.S.C. §102:"</u>

Examiner rejected claims 1-23 under 35 U.S.C. §102(b) as being anticipated by Brant et al. (U.S. Patent No. 5,805,787).

As Examiner knows, and as provided in MPEP 2131, "a claim is anticipated <u>only if each and every element</u> as set forth in the claim is found, either expressly or inherently described, in a single prior art reference" [emphasis added] (*Verdegaal Bros.* v. *Union Oil Co. of California*, 2 USPQ2d 1051, 1053). As provided herein, Applicants amend independent claims 1, 14, and 23 to more specifically recite an inherent feature of such previously filed claims to more clearly note the distinction between the claimed methods and systems and the prior art. Accordingly, Applicants respectfully submit that Brant does not disclose all the features of Applicants' amended independent claims 1, 14 and 23.

Applicants' amended independent claim 1 discloses a cache comprising a front-end interface that receives data access requests that specify respective data storage addresses, a back-end interface that can retrieve data identified by the data storage addresses, a cache formed by at least two disks, and *a cache manager that services at least one of the requests received at the front-end interface using data stored on at least two disks.*

Brant, in contrast to Applicants' independent claim 1, does not disclose *a cache manager that services at least one request...using data stored on at least two disks.* Rather, Brant discloses a cache having a controller that interfaces with a disk based disk cache array (FIG. 1, and col. 5, lines 54-55). The host system making data access requests communicates with the controller through an interface. The controller also communicates with a high volume data storage subsystem through another interface (FIG. 1). As further disclosed in Brant, a variety of possible disk-based disk cache management strategies can be used by the controller to manage the cache. Amongst the strategies referred to by Brant is the direct mapping strategy that writes N copies of the data to the disk based disk cache. Subsequently, when the data has to be accessed, the Brant cache system can select <u>the single disk</u> which can most quickly access the copy of the data stored on it (col. 7, lines 1-16). Accordingly, Brant, unlike Applicants' independent claim 1, *does not teach* that upon receiving a data access request at the interface

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communicating with the host system, the controller *services at least one of the requests using data stored on at least two disks*.

Since Brant does not teach Applicants' independent claim 1 feature of a *cache manager that services at least one of the requests ... using data stored on at least two disks*, Applicants traverse the Examiner's 35 U.S.C. §102(b) rejection of independent claim 1, and thus consider independent claim 1 to be allowable. Claims 2-13 are also allowable as depending from an allowable base claim.

Independent claim 14 includes a feature of *servicing at least one of the requests using data stored on said at least two disks*. As provided with respect to allowable independent claim 1, Brant does not teach a cache manager capable of servicing a request using data stored on at least two disks. Additionally, independent claim 23 also claims *a cache manager that services at least one of the I/O requests ... using ... said at least two disks*, which, as provided herein, is not taught by Brant. Accordingly, Applicants traverse Examiner's rejection of independent claims 14 and 23 and consider independent claims 14 and 23 to be allowable for the same reasons provided with regard to allowable independent claim 1.

Since claims 15-22 depend from allowable independent claim 14, claims 15-22 are also allowable as depending from an allowable claim base. Applicants thus traverse Examiner's rejection of claims 14-22.

New Claims 24-38

New claims 24-31 depend from one of allowable independent claims 1, 14, or 23, and hence, are also allowable.

New independent claim 32 includes *a cache manager that services at least one of the I/O requests received via the front-end interface using blocks temporarily stored on said at least two disks*, and accordingly, for the reasons provided relative to allowable independent claims 1, 14, and 23, Applicant considers independent claim 32 to also be allowable. New claims 33-38 depend from allowable independent claim 32, and hence are also allowable.

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CONCLUSION

In view of the foregoing remarks, Applicants submits that the response herein is fully responsive to the subject Office Actions (November 4, 2003, and, January 21, 2004), and that the pending claims are patentable over the cited prior art. Accordingly, Applicants submits that the claims are now in condition for allowance. Withdrawal of the pending rejections, and favorable reconsideration are respectfully solicited. If there are any remaining issues or the Examiner believes that a telephone conversation with Applicants' attorney would be helpful in expediting the prosecution of this application, the Examiner is invited to call the undersigned at 617-832-1241.

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